

POLICY RESEARCH WORKING PAPER

WPS 2012

2012

# Export Quotas and Policy Constraints in the Indian Textile and Garment Industries

*Sanjay Kathuria*  
*Anjali Bhardwaj*

Substantial export tax equivalents exist for Indian textile and clothing exports, especially to the United States. In today's world, these would have been even higher if domestic Indian policy constraints had been relaxed. In tomorrow's world, the health of India's textile and clothing industries may depend on timely relaxation of these constraints.

The World Bank  
Development Research Group  
Trade  
November 1998



## Summary findings

The Agreement on Textiles and Clothing will abolish all quota restrictions in trade in textiles and clothing by the year 2005. Dismantling the quota regime represents both an opportunity (for developing countries to expand exports) and a threat (because quotas will no longer guarantee markets and even the domestic market will be open to competition).

Data about the real burden imposed by distorting but nontransparent policies under the quota regime are inadequate, so Kathuria and Bhardwaj interviewed traders in Delhi and Bombay about quota rents. They provide comprehensive estimates of the magnitude of the implicit export taxes resulting from the labyrinth of quotas imposed under the WTO Agreement on Textiles and Clothing. Using the concept of an export tax equivalent (or ETE), they assess how much exports are restricted.

The international trade regime in textiles and clothing imposes a substantial tax equivalent on Indian exports. Between 1993 and 1997, ETEs for garment exports to the United States were roughly double those for the European Union. The ETEs for the United States declined in 1996, which could be a warning signal that India faces increasing competition from a NAFTA-empowered Mexico.

From India's viewpoint, the European Union is ahead of the United States in dismantling the quota regime — and in not restricting Indian cotton (garment) exports (where India has a comparative advantage) more than synthetics.

India's strengths in this sector lie in natural resources and factor endowments — raw cotton and cheap labor. The Indian garment industry's decentralized production structure — subcontracting, which is low risk and low capital — has served the industry well but has excluded Indian products from the mass market for clothing, which demands consistent quality for large volumes of a single item.

Growth in Indian exports may require a shift to an assembly-line, factory-type system. This would probably require:

- No longer restricting garment production to the small-scale sector (and ending other anachronistic policies).
- Making labor policy more flexible.
- Ending the policy bias against synthetic fibers.
- Reducing transaction costs for exports.

---

This paper — a product of Trade, Development Research Group — is part of a larger effort in the group to assess the impact of industrial country trade policies on developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Lili Tabada, room MC3-333, telephone 202-473-6896, fax 202-522-1159, Internet address ltabada@worldbank.org. November 1998. (38 pages)

*The Policy Research Working Paper Series disseminates the findings of work in progress to encourage the exchange of ideas about development issues. An objective of the series is to get the findings out quickly, even if the presentations are less than fully polished. The papers carry the names of the authors and should be cited accordingly. The findings, interpretations, and conclusions expressed in this paper are entirely those of the authors. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.*

# **EXPORT QUOTAS AND POLICY CONSTRAINTS IN THE INDIAN TEXTILE AND GARMENT INDUSTRIES**

Sanjay Kathuria and Anjali Bhardwaj  
SASPR, World Bank  
New Delhi Office

# **EXPORT QUOTAS AND POLICY CONSTRAINTS IN THE INDIAN TEXTILE AND GARMENT INDUSTRIES<sup>1</sup>**

## ***I. Background***

India has a very old and rich tradition in the textile industry. Today, it is the single largest source of employment and net foreign exchange earnings (table 1 shows that exports of textiles, yarn and garments were nearly \$8 billion in 1996-97 or 23.7% of total exports). However, it also happens to be the one of the remaining sectors where Government intervention is all-pervasive. This, along with the weight of tradition, has meant that the textile sector in India has developed in a unique way. The question that demands an urgent answer is whether the industry is capable of meeting the challenge of a post-Uruguay Round world, wherein there will be not only be increased competition for export markets, but also import competition for the domestic market.

This paper is woven around the primary data collected through interviews with various garment and textile exporters and quota brokers in India. Section II of the paper deals with the complex quota administration system in India and estimates the export tax equivalents of the MFA regime for Indian textiles and garments by categories and, perhaps for the first time, by fiber (cotton and non-cotton). In sections III and IV we discuss the major domestic constraints confronting the garments and textiles sectors. We also suggest possible policy actions. Section V discusses transactions costs of trade policies, and section VI summarizes and concludes.

## ***II. International Trade in Textiles: Export Tax Equivalents***

### **Measurement of Quota Rents**

World trade in yarn, textiles and apparel has been regulated by the Multi-Fiber Arrangement (MFA) since 1974, the sequel to an increasingly pervasive quota regime that began with the Short Term Arrangement on cotton products in 1962. The MFA framework provides for imposition of import quotas by developed countries on the exports of these products from developing countries. The quotas are usually negotiated bilaterally under threat of unilateral restraints by the importer. The quotas can

---

<sup>1</sup>For comments and suggestions, we are extremely grateful to Will Martin and Garry Pursell. We would also like to thank Harpinder Oberai for help in editing the paper.

discriminate by fiber and by function: typical examples are ladies' cotton blouses, gents' shirts, etc. The MFA has now been replaced by the Agreement on Textiles and Clothing (ATC), which has the same MFA framework but in the context of an agreed, ten year phasing out of all quotas by the year 2005. This phase out creates new opportunities and challenges that policy makers must understand if they are to frame the right policy responses.

The MFA/ATC (for ease of reference we shall henceforth use only MFA) quotas are administered by the exporting countries. If the quotas are binding, then quota rights command a price, and in many countries these rights are allowed to be traded. In order to export, a firm either has to buy a quota in the market or forego selling one it owns. This imposes a cost on the firm exactly analogous to an export tax. One could also think of the quotas as introducing implicit export taxes levied by the exporting country government, which are then redistributed to specific firms (i.e. to those who own the quotas).<sup>2</sup> It needs to be remembered, however, that the taxes arise from the restrictions imposed by the importing country. *We define the export tax equivalent (ETE) as the value of the quota divided by the price received by a producer who does not own quota for this product.*

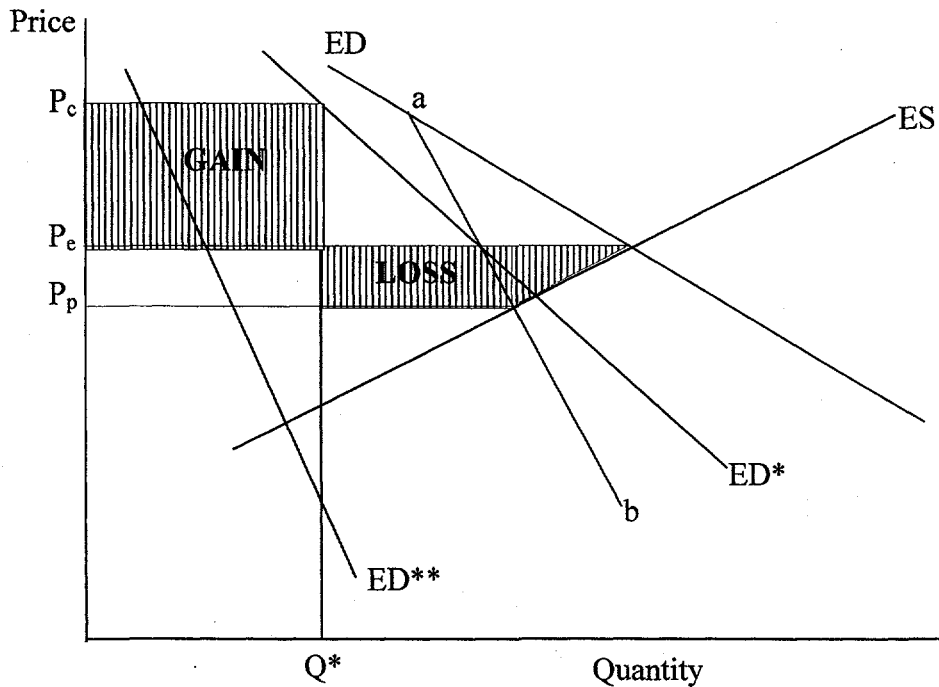
Why are we interested in calculating quota rents? Because protection measures like the MFA are non-transparent, so that neither the countries imposing the protection, nor those suffering from it, know what rate of protection is being imposed. In the absence of such hard estimates, many studies are based on assumed values for the critical protection parameters. Quota rents, which are one measure of protection, measure the distortion resulting from the quotas, and are one element in an overall calculation of the losses and benefits arising from the MFA regime.

Figure 1 shows the simplest representation of the MFA. Since MFA involves restrictions only on imports into major developed country markets, two import markets have to be considered even in the simplest case. In this figure total import demand consists of two components,  $ED^*$  and  $ED^{**}$ , with  $ED^*$  being the net demand for imports by the developed countries and  $ED^{**}$  the excess demand for imports by the rest of the world. Total world demand corresponds to the curve  $ED$  (horizontal aggregation of  $ED^*$  and  $ED^{**}$ ) and total supply of exports from the developing countries is given by excess supply curve  $ES$ . In the absence of a quota, the world price,  $P_e$ , is that at which total import demand equals total export supply. Restrictions of the MFA type might, in principle, be represented by the quota limit  $Q^*$ .

---

<sup>2</sup>See Martin (1996), Martin and Supachalasai (1990), and Trela and Whalley (1990).

**Figure 1 - Representation of the MFA**



*Source: Adapted from Will Martin and Suphat Suphachalasai (1990, p 51)*

The imposition of such a quota reduces total world import demand, shifting the world demand curve to the left to a new, kinked demand curve EDab. Following imposition of the quota the world price falls to  $P_p$ , which increases consumption in the rest of the world. The price in the restricted market after the imposition of quotas is assumed to be  $P_c$ . Thus quota rents equalling  $(P_c - P_p) \cdot Q^*$  are generated with the quota having exactly the same effect as an export tax of  $(P_c - P_p)^3$ .

While quota rents are a gain for exporting countries, these gains must be weighed against the reduction in the price of exports to unrestricted markets, arising from the decline in demand in the restricted markets. In the figure, the shaded areas represent this gain and loss of producers' surplus. Also, since the MFA diverts output from low cost to high cost producers, the average cost of world textiles output must increase, leading to a decline in world demand, which in turn reduces the derived demand for fibers, and hence fiber prices. These costs are important for fiber producing countries such as India. While it is likely that highly restricted and dynamic textile exporters such as, for example, India and

<sup>3</sup> The demand curves for individual countries will of course be much flatter than in the figure, which represents world demand and supply. In fact, small countries could be represented as price takers.

Pakistan will on the whole have suffered substantial costs from the imposition of quotas<sup>4</sup>, we do not have exact calculations of net welfare. In this paper, we will focus only on the estimation of quota rents and ETEs for Indian garment and textile exports. Other things being equal, a higher ETE would imply a more restrictive MFA regime.

## Quota Administration in India

In India, the quotas for garments and knitwear are administered by the Apparel Export Promotion Council (AEPC), while those for yarn, fabrics and made-ups are done by the Cotton Textiles Export Promotion Council except for certain categories of synthetic textiles, which are administered by the Synthetic and Rayon Textiles Export Promotion Council.

The 1997-99 allotment policy is as follows. In the case of *garments*, the highlights are:

- Quotas are levied by category. As much as 75 percent of the quotas each year are allotted against a past performance entitlement (PPE), and the balance is distributed against new investors' entitlement (NIE) (10 percent), first come first served (FCFS) entitlement (10 percent), and non-quota exporters' (NQE) entitlement (5 percent).
- The PPE is allotted pro-rata on the basis of the value of exports to the country-category in the base year<sup>5</sup>. Within the 75 percent quota, 5 percent is reserved for those firms realizing a higher unit value than the average during the base year.
- The PPE quota has to be utilized between January 1 and September 30, and has to be surrendered thereafter unless extended up to December 31.
- The FCFS quotas are released on January 10 and April 10 of each year, and allotments are made on a per day basis. Within the day rationing is done on the basis of higher unit value realization of export orders amongst the applications, supported by valid letters of credit.
- The NIE is designed to give an incentive for new investments, and allocates 1000 pieces per Rs. 100,000 of admissible investments. These 1000 pieces are divided equally into at least five country-categories and allotment is restricted to those quota categories relevant to the manufacturing facilities of the applicant.

---

<sup>4</sup> See Martin (1996)

<sup>5</sup> The phrase "base year" for an allotment year means the calendar year preceding the year immediately before that allotment year, for e.g. the base year for the year 1997 is 1995.

- The NQE entitlements are made pro-rata on the basis of value of exports to non-quota countries and non-quota exports to quota countries.
- The PPE and NQE entitlements are transferable, while the others are not. Quota transfers are allowed only until September 20 of each year, but only 50 percent are transferable after May 31. Transferred quotas have to be used by September 30 unless extended until December 31.

In the case of *yarn and textiles*, the PPE at 55 percent is much lower than for garments. More weight is given for manufacturer exporter entitlements (those who have undertaken substantial modernization, being 15 percent for all categories of yarn and textiles except handlooms, where it is zero), ready good exporters' entitlements (allotted on a first come first served basis, and is 15 to 40 percent), and the balance going to NQE and/or to powerloom exporters entitlement (the latter in the case of certain fabrics and made-ups). Although the data we have collected for this study pertain to a different period than described by the above allotment policies, the policies have not changed very much, with the changes being in the details.<sup>6</sup>

The point of giving details of the quota allotment policies is to illustrate some of the distortions created by them.<sup>7</sup> *One*, the system disaggregates further the narrowly defined quota categories, as we saw above. This multiplies several fold the number of quota categories defined by the importing countries, and has resulted in a "...vast quota administering bureaucracy with its own vested interests" (Kumar and Khanna, 1990: 201). *Two*, and following from this, the chances of quota under-utilization are higher the greater the number of quota sub-categories and other rules and regulations, especially in the face of a less than efficient transfer mechanism: the classic problem of "fragmentation". *Three*, at least some of the substantial fluctuation in quota premia over a year can be attributed to the way that the quotas are allocated, owing to the free for all FCFS quota system as well as the system of within the day trading. *Four*, the firms with PPE quotas often use their PPE allocations to subsidize their bids under the FCFS system, which results in price distortions. *Five*, the FCFS system resulted in a proliferation of ghost firms, with firms submitting multiple applications at different unit prices. As Trela and Whalley (1990) point out, some of these quota allocation procedures can lead to economic inefficiency. The existence of past performance quotas protects existing firms from new competition and creates a disincentive (albeit not an insurmountable barrier) for new firms to enter. Also, there is not enough incentive to diversify to non-quota markets. Another problem is the rent seeking behavior of the firms

---

<sup>6</sup> For example, in the case of garments in the 1996-98 policy, the PPE entitlement was 80 percent, and that for FCFS was 20 percent including that for new investors' entitlement. For a history of policies in the 1980s, see Kumar and Khanna (1990).

<sup>7</sup> Most of this paragraph draws from Kumar and Khanna (1990: 199-202). Also see Trela and Whalley (1990).



who have PPEs and who try to create scarcities by holding on to the quotas and selling at the highest possible price.

## Data Sources

In a task such as this, we could not proceed without reliable data. Not only did we need the prices at which quotas are transferred (quota premia), but also a fiber-wise (i.e. between cotton and non-cotton) break-up of the premia across all categories of products. Unfortunately, the quota administering authorities, the Apparel Export Promotion Council and the Textiles Export Promotion Council, do not maintain records of prices at which quotas are transferred.

We therefore turned to the exporters hoping they would have documented their quota transfers. On approaching the garment exporters, however, it became clear that the biggest players in the market as far as quota transactions are concerned are the quota agents / brokers. We concentrated on meeting these brokers and collecting information from them. The data have been collected from the records of a set of six quota brokers and five exporters based in Delhi and Bombay. We found that a handful of quota agents are responsible for a large share of quota transactions; also each exporter interviewed actually owns a large number of registered firms. These firms are owned by the exporters but are registered under different names so that none of the firms exceeds the maximum permissible limit of investment stipulated under the small scale industries law (see section III). In other words, our apparently small sample is probably quite representative of the quota transactions in the garment industry.

For garments there are primarily four centers where quota trading takes place on a large scale in India - Delhi, Bombay, Madras and Bangalore. The information we collected was from exporters and agents in Delhi - however these figures appear to be representative of all the centers, because of arbitrage. If there emerges a large difference in premia between the centers, then trading of quotas takes place across states which balances demand and supply, thereby more or less equating the quota premia across states.

In the case of textiles however, a major part of the transactions takes place in Bombay. We therefore prepared a questionnaire and sent it to different quota agents there. We also collected information from some agents in Delhi, and the figures were very close.

The credibility of the data collected for both garment and textiles sectors was enhanced by the fact that the variation in figures reported by different sources was narrow in most cases.

There are day to day variations in the quota premia for the various categories. All categories have individual quota premia except USA Group II products for which the premium exists for the group as a whole. Since it was impossible to gather information for quota premia on a daily basis, we took the range within which quota premia fluctuated for any given year, and eventually used the average of the range. Finally, in order to arrive at the quota premium for any given year for any particular category, we used the simple average of the figures quoted by the different sources. The data have been aggregated into simple and weighted averages. In the calculation of weighted averages, the weights have been formulated using all products having a non-zero ETE in any of the years under consideration (1993-96).

What lies behind the quota premia are, of course, more fundamental issues relating to the competitiveness of the industry. This is what we discuss in the second half of this paper. In doing so we drew not only upon our meetings with quota brokers, but also interviews with exporters, manufacturers, policy makers and industry associations.

## Export Tax Equivalents : the Results

ETEs are calculated here on the basis of unit values of exports, as  $[QP/(UV-QP)]*100$ , where QP is the quota premium and UV the unit value of exports. The ETE indicates the quota premium as a percentage of the premium-less unit value of exports<sup>8</sup>. Apart from the individual ETEs calculated for each quota category, we have also aggregated the quotas by country or region and by fiber.

The paper assumes that ETE can be equated with restrictiveness of the import regime. Intuitively, the ETE represents an excess demand in the form of a price, reflecting how much extra importers are willing to pay for Indian goods, given that they can also pay extra for goods of other countries. An increase in ETE (or a higher ETE for a product) for a product/s will mean that the regime has become more restrictive. However this is not the same as an increase in competitiveness: if the Indian ETE increases, that for China can increase even more, which means that if quotas were abolished, China would gain market share at India's expense. Thus, the magnitude of ETE on its own is not an indicator of competitiveness (for that we would need other countries' ETEs, as well as size of quotas and exports). In

---

<sup>8</sup>In figure 1, the ETE is  $[(P_c - P_p)/P_p]*100$ .

terms of our usage, ETE is an indicator of how restricted Indian exports are, given the demand and supply situation at that time for that product.

In this exercise, we focussed on the two largest markets for Indian textiles and garments, the USA and the EU, which accounted for 73 percent of total textile exports in 1995/96. As a proportion of quota-restricted (MFA) markets, their share is even higher, accounting for 94 percent of total exports in 1995/96. For the USA as a whole, table 2 and figure 1(a) shows that overall (weighted by value of exports) ETE, which was 38.8 percent of the unit value of exports in 1993, and 36-37 percent in 1994 and 1995, declined to 28 percent in 1996. Exports to the EU appear far less restricted, with aggregate weighted ETEs being around 14 percent between 1993 and 1995, increasing to about 19 percent in 1996 (table 2). Thus, while exports to the USA are tightly constrained, there appears to have been a slight relaxation of this constraint in 1996, coinciding perhaps with an increase in the competitiveness of Mexican exports arising from NAFTA <sup>9</sup>. While there have been improvements in access to the EU market for suppliers in Eastern Europe and Turkey, this has not had an impact on India's ETE so far.

Figure 1(a) - Weighted Average of ETEs for the USA (%)

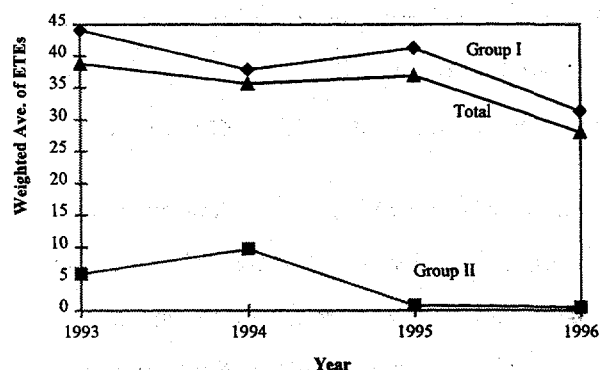


Figure 1(b) - Simple Average of ETEs for the USA (%)

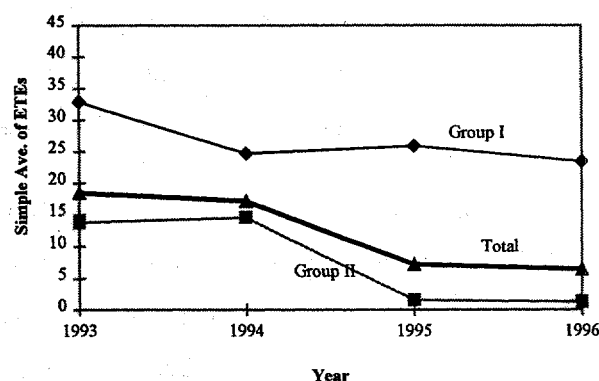


Table 2 and figure 1(b) also show the average ETEs for different groups of products in the US market. As opposed to the weighted average, the simple average shows that there was a dramatic decline in overall ETEs from 17 percent in 1994 to 7 percent in 1995. This was on account of the decline in ETE for Group II products. Group I products, whose exports are far larger, counteracted this decline with an increase in their weighted as well as simple average ETEs in 1995, which accounts for the overall weighted ETE increasing in 1995. In 1996, on the other hand, there was no major decline in Group II,

<sup>9</sup> Research reported in The Economist (July 5, 1997) on the NAFTA effect appears to indicate that big American textile firms have been investing in Mexico since the genesis of NAFTA in 1994. The author of the research, Gary Gereffi, says that big retailers from the USA were starting to promote Mexican made goods through their North American networks.

but Group I products showed a decline in both weighted and simple average ETEs, which accounts for the aggregate weighted ETE declining from 37 to 28 percent.

A disaggregation by product category (Table 3) reveals that the decline in ETEs in 1995/96 in the USA is largely confined to items in Group II, as is implicit in the simple average ETE numbers of the respective groups<sup>10</sup>. In Group I products, the decline in ETEs in 1996 (simple average ETE down from 26% in 1995 to 23% in 1996) arises very largely on account of the decline in category 338/339 from 101 to 58 percent, which has to be seen in the light of the fact that 101 percent may itself be an aberration. What is *more significant and necessary to explain is the decline in Group II*, which in fact took place in 1995 and continued thereafter into 1996 (as well as 1997). The most likely explanation is the decline in quota utilization in Group II in 1995<sup>11</sup>. According to AEPC statistics, quota utilization in Group II declined from 87.5 percent in 1994 to 75 percent in 1995 (in Group I, on the other hand, there was an increase in utilization from 103 to 104 percent). The NAFTA explanation is difficult to admit, since it should have affected both Group I and II products and at the same time.

Another possible explanation revolves around the fact that Group II quotas are a block for the group as a whole, and not for individual products. Thus, the rupee premium is applicable to Group II as a whole (the ETE is different for each product because of different unit values). If there is a sudden change in demand for certain products within the Group, it will affect the premium for the entire group.

It seems that the demand for small jackets rose sharply in 1993 and 1994, and then declined in 1995, leading to the observed change in premium. This explanation is valid only if there is informal quota segmentation in Group II between products and/or there are other imperfections in the quota allocation system, which is quite likely since it is based on bidding through informal networks with deals usually being done over the telephone.

The story then would be that it is as yet unclear whether the observed decline in India's ETEs to the USA is part of a secular trend or an aberration for 1995/1996. Given the backloading of the quota liberalization in the ten year transition period, and a probable increase in competitiveness of Indian textiles and garments if domestic policies are liberalized, *the ETEs may not drop, but we cannot be sure*. It should also be noted that ETEs in the range of 28-37 percent for the USA are *higher than the actual*

---

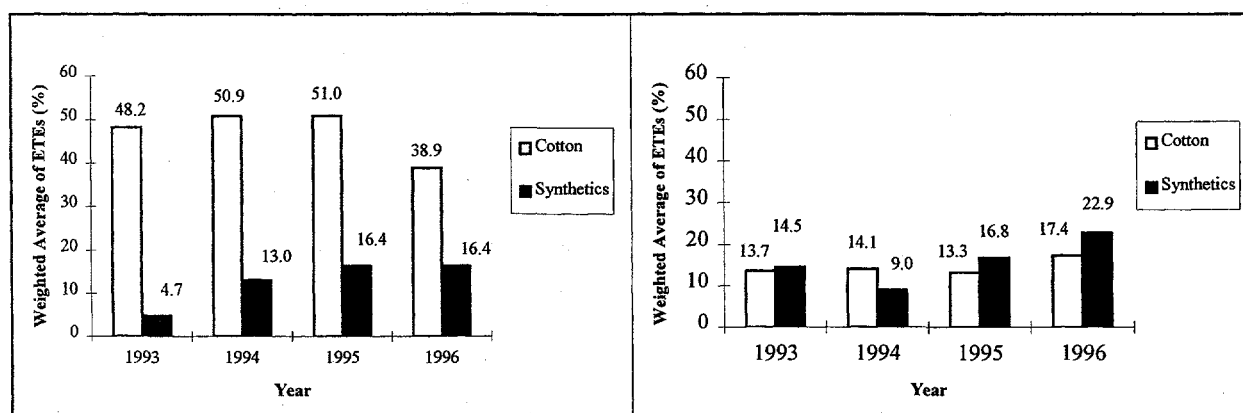
<sup>10</sup>The 1997 data are preliminary since they do not cover the full year.

<sup>11</sup>However in 1996 the quota utilization rate recovered to over 100 percent.

*tariffs* levied by the USA on imports of textiles and apparel, and give one (partial) indication of the hidden cost of the MFA, both for the exporting as well as the importing country.

Given the nature of the MFA, the importing country may try to put greater restrictions in the path of products in which exporters have a greater comparative advantage. In India's case, it is well-known that its comparative advantage clearly lies in cotton as opposed to other fibers (but see section IV). This is corroborated by tables 5 and 6 (and Figures 2(a) and 2(b)) which show the weighted average ETE for cotton and synthetic products, separately, aggregated across all apparel categories<sup>12</sup>. For cottons, the ETE for USA was around 50 percent between 1993 and 1995, declining to 39 percent in 1996. As expected, the ETE for synthetics was far lower, being 13 percent in 1994 and 16 percent in 1995 and 1996. Not only this, for cottons, the products with the highest ETEs also have the highest weights in overall cotton garment exports. In 1995, for example, categories 338/339 (knit shirts and blouses) and 340 (gents shirts non-knit) had ETEs of 99 and 53 percent, respectively, and shares of 31 and 27 percent in cotton exports. In other words, the most popular cotton products are also the most restricted.

Figure 2(a) - Weighted Average of ETEs by Fibers for the USA    Figure 2(b) - Weighted Average of ETEs by Fiber for the EU



On the other hand, for synthetics, products with very high ETEs have a very low weight in overall exports of synthetics. Thus, in 1995, the products with highest ETEs of 110 (category 338/339) and 56 percent (category 640, gents shirts non-knit) had weights of only 0.35 and 1 percent respectively, whereas the most popular synthetic items had lower ETEs: category 636 (dresses including uniform, ETE

<sup>12</sup>Keeping in mind the caveat (see beginning of this section) that comparative advantage does not have a simple correspondence with ETEs. It is conceivable, for example, that a lower ETE product can be more competitive than one with a higher ETE - its low ETE may simply be because of a very liberal quota. Another problem arises from the export controls on yarn and cotton (see section IV). Since sometimes the best alternative to exporting cotton garments is to sell them domestically (where prices can be lower than border prices owing to export restrictions), higher ETEs for cotton garments can sometimes result.

29, weight 30 percent), category 642 (ladies skirts, ETE 21, weight 23 percent) and category 641 (ladies blouses and shirts, ETE 8, weight 19 percent)<sup>13</sup>.

For the EU, this behavior is less noticeable. Weighted average ETEs for cotton were 13-14 percent over 1993-1995, and 17 percent in 1996. For synthetics, the ETEs were higher than for cotton in 1995 and 1996, being 17 and 23 percent respectively. The simple reason is that a lot more exports to the EU are of products which are outside QRs, i.e., either non-restrained (although within the MFA) or outside the MFA. For example (see table 7), in 1996, as much as 29 percent of the value of total garment exports were outside QRs. In the case of the USA, only 8 percent of garment exports were outside QRs. Thus, a significant proportion of exports which would otherwise have generated considerable quota rents have already been given free trade status.

In other words, at least as far as India is concerned, *the EU is further ahead in reducing the restrictiveness of the MFA regime than the USA*: reflected in the fact that a) ETEs are on average lower in the EU; b) the differential in average ETEs for cotton (in which India has a strong comparative advantage) in the two regions is even more than in overall ETEs; c) the differential between cotton and synthetic ETEs in the EU is not large, unlike in the USA. Of course, if the observed lower ETEs in the European market reflect greater trade diversion towards favored markets, then the lower protection against Indian products may benefit neither the EU nor India.

The implications, at least for the USA, are: **one**, cotton is more restricted as a whole since it is more disruptive for the importing countries (three-fourths of MFA garment exports of India are cotton products); **two**, this logic can be extended to within fiber categories, since it is the most popular (and hence most disruptive for importers) cotton products whose exports are most highly restricted. On the other hand, the popular synthetic items are not restricted as much, since their exports are relatively small in absolute terms and are hence less disruptive for the importing country. This does not apply to the EU, where a far greater proportion of exports are outside the QR import route.

Another issue is related to the incentive to diversify away from high ETE products. If ETEs are high, and if the quota administration mechanism is less than perfect, then there could be an incentive for

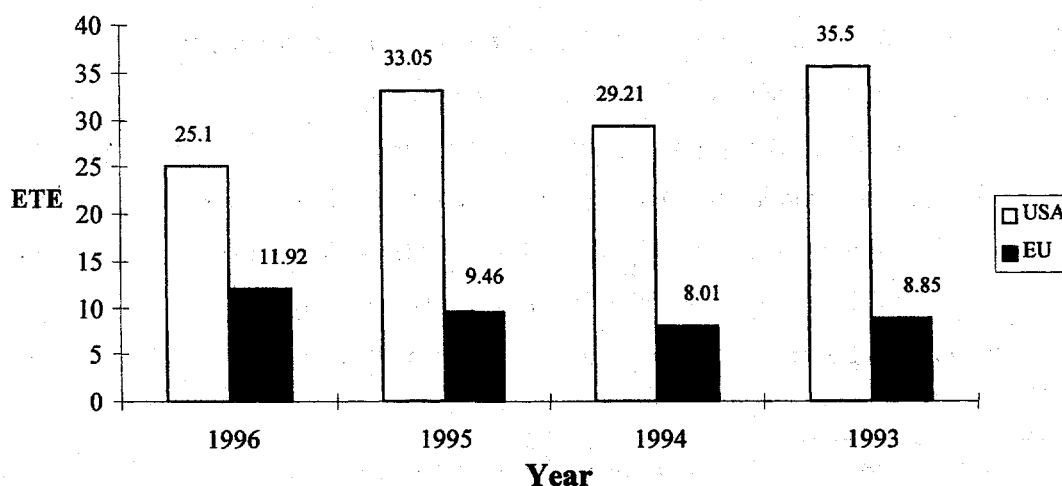
---

<sup>13</sup>It may be argued that the above conclusions are based merely on our use of weighted averages. If we use simple averages, table 2 shows that the difference between ETEs of cottons and synthetics is lower, and therefore the conclusions that cotton is more competitive and that more competitive products are more restricted is not as strong. In other words, if synthetics had a larger quota, they would also have seen higher exports. However the fact that exports of cottons are far greater than synthetics, even for non-quota countries, substantiates our inferences, e.g. the share of cotton in total garment exports was 64% in value terms for countries outside bilateral agreements in 1996-97.

exporters as a group to diversify towards non-quota products/countries, or to lower ETE items. Table 8 shows calculations of ETEs for quota garments exclusively as well as for all garments, whether or not within the restricted categories. The ETE for all products will naturally be lower (for non-QR items, the ETE will be zero although the weight will be positive), and will reflect the actual extent to which exports take place outside the QR regime.

The table shows that the ETE for all products in the case of the USA is usually only 2-3 percent points lower than the quota driven ETE, whereas for the EU it is 4-5 percent points lower. The reason of course is that a higher percentage of exports to the EU are non-quota, which have a zero ETE and hence bring down the aggregate ETE. This also implies that as more and more products in the USA go outside the quota route owing to the gradual dismantling of the MFA, the gap between the quota and all product ETE will increase. Apart from this dismantling of the MFA, our hypothesis (relating to diversifying away from high ETE products), if correct, could mean a further increase in the gap as exporters diversify away from high ETE products. However, our data set is for too limited a time period and does not permit testing of this hypothesis. It should be noted that the quota allocation policy does not encourage much diversification : the non-quota exporters (NQE) entitlement is only 5 percent. Implicitly, the policy is saying that non-quota exports is its own reward. Since NQE entitlement raises the level of competition for entrenched firms, policy makers should think of a significant increase in this.

**Figure 3 - All Products ETEs for the USA and the EU (%)**



The data set for textiles is far more limited than for garments. Table 9 shows the ETEs for yarn and fabrics for the USA and EU, mainly for 1995 and 1996. The strongest conclusion that can be drawn from

the table is that the ETE for yarn is significantly higher than for fabric, cloth etc. Again, average ETEs are somewhat higher for the USA than for the EU.

### **III. Policy Restrictions on Growth in the Garment industry**

The garment industry is based on a system of decentralized production. This owes at least partly to the existence of labor legislation and the lack of an effective exit policy, as well as the reservation of garment and hosiery production for the small-scale sector.<sup>14</sup> However, decentralized production also has natural advantages such as cheap labor in the subcontracted firms as well as flexibility of production. The question that now arises is that is the decentralized system of production getting to be a constraint to investment and therefore to increased productivity and growth of the apparel industry?

Garments are manufactured in three stages<sup>15</sup>: *cutting* the fabric to patterns, usually done by power-operated cutting machines; *making* or sewing the garment on sewing machines, either foot-operated or power-operated; and *finishing* the garment by trimming, checking for dimensions, washing, ironing and packing. The most labor-intensive part of the process is the sewing operation. Most firms in India outsource at least the sewing operation, which, together with cutting, constitutes 21.5 percent of overall costs (in Khanna's (1991) survey). Materials contributed 54.5 percent of costs, while finishing and overheads contributed 9 and 15 percent respectively. The firms who provide the sewing services are typically called fabricators.

Most firms in India use the decentralized form of production organization. In Khanna's (1991) study, 157 out of 175 firms that provided data had resorted to subcontracted production, and only 18 reported complete in-house production. Depending on the order, a merchant exporter could be using from two to twenty fabricators at any point of time. Since the garment industry has seen impressive growth in the past (\$872 million in 1985-86 to \$3676 million in 1995-96), it means that the production structure has so far served the industry very well. Khanna (1991: 115) labels the fabricators as the "...backbone of the apparel industry in India". The advantages have been low wages in the fabricating firms, flexibility in meeting even small orders, and creativity of Indian designers in fabric printing.

---

<sup>14</sup> Alam (1991), in a study of small industrial firms, found that firms deliberately minimize the size of the labor force in order to reduce the bargaining power of employees and to avoid legal obligations towards them. The commonest way to do this is to separate the most labor intensive production process, ie fabrication in the case of garments, and get this work done by outside contractors.

<sup>15</sup> This draws on Khanna (1991), chapter 7.



It would not be unfair to say that Indian garment exports have been niche-based, focusing on low volume and high variety of outputs, within the broad area of fashion clothing and especially ladies outerwear. The flexibility in the Indian production system is eminently suited to meet this demand. In fact, the nature of demand and the characteristics of the production system are mutually reinforcing. The downside of relying on fabricators implies that there can be variations in different lots of output, which means that India gets excluded from the mass market for clothing, which demands good and consistent quality across huge volumes of a single item of clothing, such as in uniforms.<sup>16</sup> Moreover, the average quality of output, although much improved, still has not allowed it to go beyond the middle price range.

In this context, it is interesting to observe that all the countries with very successful garment exports have a much lower level of subcontracting than India. As Khanna's (1993: 285) study points out, apparel firms in India subcontracted 74 percent of their output, compared with only 11 percent for Hongkong, 18 percent for China, 20 percent for Thailand, 28 percent for South Korea and 36 percent for Taiwan. All these countries have a broader base of exports, and have done very well in the market for large volumes of uniform products. The implication of this observation as well as that in the previous paragraph is that in order for Indian exports to grow substantially beyond present levels, there may be a need to change the current overwhelming reliance on fabricators.

With the managed trade era in textiles due to be phased out in 2005, it is important that Indian industry be prepared for a much more competitive environment, both at home as well as in foreign markets. Even the domination by India of market niches described above is not likely to last forever, based as it is on strengths arising basically from natural resources and factor endowments, namely cheap and flexible labor and raw cotton. As is well-known from product cycles, **strengths based on cheap labor can only be transitory**, as some other country with cheaper labor will eventually come and displace the existing country from international markets. Even if we neglect this possibility on the grounds that this transition may be a long way away, it is nevertheless true that in order for Indian apparel exports to improve or even sustain current growth rates, one key requirement will be investment in assembly-line production in factories. This would be so that quality, consistency and tight delivery schedules can be maintained, as has been done in other parts of Asia.

Much of the garment industry is aware that factory investment is needed, but has been unwilling to commit itself to larger investments. This is partly because of failures of some high-profile ventures

---

<sup>16</sup> In Khanna's (1993) study of 149 apparel manufacturers in five countries of SE Asia, manufacturers in Hong Kong and Thailand observed that Indian garments lacked consistency and uniformity in quality.

into garment factories, at least partly on account of labor problems. It is not as if there are no large organized sector firms in the country—quite the contrary. What is then that makes the garment industry so different or unable to handle the labor issue? Perhaps it is the high export orientation of the industry as well as its focus on fashion goods, wherein even a short strike can cripple the firm. A second reason for lack of investment in factories is that the domestic fabric base is not fully compatible with the demands of factory production, with large lengths of uniform lots of fabric, which are needed for factories, not being produced in the domestic sector. This is because fabrics are sourced largely from (small) powerlooms and/or because of lack of good quality dyeing and printing facilities for fabrics.

**Box: Comparison of Garment Factories in Asian Countries**

**Table – A: Productivity Levels of Apparel Firms(No. of pieces per machine per day)**

	Ladies blouses	Gents shirts	Ladies dresses	Ladies Skirts	Trousers
S. Korea	14.6	17.4	8.8	17.5	15.6
Taiwan	18.9	18.2	12.4	16.6	16.1
Hongkong	20.6	20.9	20.2	19.3	19.3
China	10.9	14.0	7.8	13.0	6.7
Thailand	17.0	19.8	12.2	20.5	13.1
India	10.2	9.1	6.3	9.6	6.8

Source: Khanna (1993: 282).

The comparison above is based on individual field surveys of 177 firms in India and 149 firms in the other countries done by Khanna in all the countries over 1991/92 except India where it was done in 1987.<sup>17</sup> The comparison pertains to single machine workstation assembly lines only, which are manned by single operators. The figures demonstrate that the number of pieces produced per machine per day in Indian factories is lowest amongst all countries, and is less than 50 percent of the productivity in Hongkong. These differences can be put down to levels of investment (see table B) as well as organization of production, and possibly to skills and worker specialization.

Table B below highlights the very low levels of investment in Indian firms. The average investment in machines in an Indian factory was \$ 29760 as compared with an investment of \$ 2.5 million in Hongkong and nearly \$ 1 million in China. This in turn reflects the smaller size of the Indian firm, with an average of 119 machines per firm as against 698 in Hongkong and 605 in China. Perhaps more importantly, it reflects the lower levels of investment per machine, with investment in India being only \$ 250 per machine versus \$ 3510 in Hongkong and \$ 1500 in China. As the table shows, this is due to Indian firms having a much higher proportion of manual machines, as well as the fact that even their power machines are undoubtedly less sophisticated (see table C below). In fact, the proportion of manual machines is very low even in low wage countries like China.

<sup>17</sup> There may as a result be some downward bias in India's figures, but this may not be very significant since no major structural changes took place over the period 1987-1991.

**Table - B: Machinery and Investment Levels by Apparel Export Firms(Unit: Nos)**

	Total machines	Manual machines	Power machines	Investment('000)	Inv. ('000 \$)per machine
S. Korea	258.08	6.14	240.33	722.19	2.79
Taiwan	264.62	0.15	264.46	579.21	2.18
Hongkong	698.12	4.35	688.76	2456.64	3.51
China	605.15	1.5	603.65	943.86	1.5
Thailand	572.32	0	572.32	722.25	1.26
India	119.28	37.26	75.39	29.76	0.25

Source: Individual country surveys by Khanna (1993: 270 )

Further demonstration of the low level investment in India is available from the following table, which shows that most of Indian firms' investment is in sewing machines and that special and processing machines form a very small part of the total number of machines, unlike other countries surveyed.

The data for India fits in with the known constraints under which firms operate. Industrial policy precludes large investments in the garments sector in India, unless 50 percent of the output is exported. On the other hand, in the other countries shown, which are also more successful exporters, investment is high, even in low wage countries. The inescapable conclusion is that such investments are needed in India, but are constrained by the reservation policy as well as by the inspector raj syndrome connected with the implementation of labor laws, and the lack of a flexible labor policy.

**Table - C: Typewise no. of machines installed by Apparel Export Firms (nos.)**

	Precutting machines	Cutting machines	Sewing machines	Special machines	Processing machines
S. Korea	2.9	12.3	134.3	77.5	31.0
Taiwan	2.6	7.5	185.1	49.5	12.8
Hongkong	2.3	13.2	455.4	112.7	27.9
China	2.3	13.2	450.5	104.8	34.4
Thailand	2.0	12.8	460.8	72.4	21.9
India	0.0	2.3	103.7	8.6	4.6

*Estimated on basis of data from Textiles Committee, Mumbai for India. For other countries, from Individual country surveys.*  
Source : Khanna (1993: 275 )

Our own judgment on this is that **subcontracting is a low-risk low-capital strategy**. With subcontracting, the bulk of the labor force is "outsourced", which results in a major decline in fixed costs. Investments in equipment and factory space are also minimized. Exporters are unwilling to trade this off against an unproven and high risk strategy, unless their backs are pushed to the wall (i.e. demand for the present kind of products starts declining), which has not happened so far. Risks are high because: *one*, labor becomes a fixed cost in India owing to the grave difficulty of shedding labor in an industry where demand can be cyclical; *two*, while investing in a large factory for garments, exporters have to make a commitment to export 50 percent of their output in perpetuity. While actual exports may be more than the commitments, the obligation and the attendant monitoring by the authorities enhances the risk perception for the investor; *three* (and this is more speculative), the factory mode may make the final product more expensive (albeit of higher quality), for which the off-take from the domestic market is

uncertain, since it is still highly price sensitive, and which may make the exporter more export-oriented than he would like to be/or the government requires him to be.

As far as the Government is concerned, it needs to have a longer time horizon than industry. It therefore needs to **reduce the disincentives of operating in the factory mode**. Several actions can be contemplated along these lines. *One*, abolish the **reservation for small-scale industry** in the garment sector, as recommended by the recent Abid Husain Committee (1997) on small-scale industry (which has recommended complete abolition of small scale reservation in all sectors). *Two*, and this needs to be accompany SSI dereservation, introduce a **labor policy** wherein labor can be retrenched if necessary, with appropriate safeguards. *Three*, include the garment industry in the list of industries for automatic approval for **foreign direct investment up to 51 percent foreign equity**.<sup>18</sup> *Four*, make imported fabrics available for export production in an effective manner: currently, there are long **delays in shipments, clearance** and we understand there are several problems in the operation of the duty free input for exports schemes (see also following section). *Five*, remove the **policy bias against synthetic fibers** (see following section) in the shape of high taxation, thereby increasing the domestic base of synthetic fibers and providing the factories an additional source of demand.

The interesting aspect of encouraging the factory mode is that the putting out mode will continue to thrive well into the foreseeable future. By and by, the product segments addressed by the two systems will become entirely different. At the same time, factories may continue to subcontract those elements of the process which do not compromise on quality, such as removal of waste threads from the garment.

#### ***IV. Policy Constraints in Input Supplies : the Cotton, Yarn and Fabric Sectors***<sup>19</sup>

It is almost axiomatic that an industry of such importance as textiles will, in the Indian environment, be accompanied by extensive policy intervention. However, continued interventions in the industry could be counter-productive. We will list some of the key constraints as they continue to apply to the industry. There is necessarily an element of judgment in this and the order in which the list is presented, but we believe these to be the critical issues, a resolution of which would see a release of productive forces and thereby lead to a major increase in efficiency and production.

---

<sup>18</sup> Automatic approvals mean that if the investor complies with certain clear norms, the investment will be automatically "approved". Industries not on this Government list have to await clearance from the Foreign Investment Promotion Board.

<sup>19</sup>See also report by the World Bank on Cotton and Textiles Sectors (1997) for a detailed discussion on many of these issues.

Perhaps the most critical aspect is the **policy bias against synthetic fibers**. This arose from the view that "...cotton is for the masses and synthetics for the classes!"<sup>20</sup> as well as a concern for cotton producers. Man-made fibers (MMF) have always been subject to higher rates of indirect taxation vis-à-vis similar cotton based products. Moreover, domestic costs of manufacturing synthetic fibers and polyester filament yarn are high on account of uneconomic plant size in an industry where scale economies were very important. This arose from the industrial licensing policy which licensed relatively small plants for production of specified outputs with little inter-fiber flexibility. The latter policy changed with the coming of the textile Policy of 1985, which adopted a distinct multi-fiber approach. However, although the gap has narrowed, tax policies still discriminate against MMF vis-à-vis cottons, and this discrimination at the fiber stage continues into the yarn and fabric stages. For example, while the excise duty on cotton yarn in 1997-98 was 5.75%, it was 20.7% on blended yarn and 34.5% on PFY (Polypropylene Filament Yarn).<sup>21</sup> Moreover, imported inputs for production of PSF (Polyester Staple Fiber) and PFY are still subject to high duties (for example, it is currently 25 percent on DMT, PTA and MEG and 30 percent on caprolactum).

Table 10 gives an illustration of the decline in the policy bias. The rates of customs duty on synthetic fibers and inputs into the production of synthetic fibers have been declining gradually over the years. The table shows that customs duties (not including countervailing duty which is essentially the excise duty on the imported good) on the most important fibers have declined: for VSF (Viscose Staple Fiber), from 60 percent in 1987, to 25 percent in 1996; for PSF and ASF (Acetate Staple Fiber), from more than 150 percent in 1987, to 45 percent in 1996 and 32 percent in 1997. Duties on inputs such as DMT, PTA, MEG, Caprolactum and Acrylonitrile have declined from 90-195 percent in 1987 to 20-45 percent in 1996.

Along with this, the domestic industry has also become more competitive, both at the input stage as well as the output of fibers. This is shown in Table 11 by the NPCs (Nominal Protection Coefficients i.e. basic ex-factory price/cif price): declining NPCs signify that domestic production is becoming more competitive and NPC less than one means that domestic production is cheaper than the international benchmark. VSF was already close to international prices by 1987 (NPC of 1.05) and has consistently had an NPC less than one thereafter. PSF and ASF, the fibers which were less competitive to begin with,

---

<sup>20</sup> Ramakrishna (1995: 5), in a discussion paper on restructuring the textile industry.

<sup>21</sup> For details, see World Bank (1997), volume II, annex1.

have also seen a steady decline in their NPCs, from 2.5-3 in 1984 to 1.3-1.5 by 1993 (helped by the devaluation of the rupee in 1991 and a depreciation thereafter), and by 1996 all the three fibers were competitive. The inputs that go into fiber production have also witnessed declining NPCs in all cases, and at least for two of the most important (DMT and PTA), domestic prices were competitive by 1996.

On comparing tables 10 and 11, it is evident that there is now substantial 'water in the tariff' for VSF, PSF, ASF, DMT, PTA and caprolactum, in fact some of the domestic prices are lower than border prices.

On account of the mix of the above policies, India's production, consumption and export of textiles and garments is still heavily *weighted in favor of cotton based products*. For example, cotton exports were 83 percent by volume and 75 percent by value of all apparel exports from India in 1993. As against this, world exports and consumption are predominantly in the synthetic blends. For example, table 12 shows that synthetic consumption as a proportion of total consumption of different fibers in 1992 was roughly 70 percent in Korea, 66 percent in Germany, 62 percent in Japan, 56 percent in the USA, 44 percent in Indonesia, 42 percent in Thailand, but only 18 percent in India. In India, at least, production follows consumption patterns quite closely. But it also means that India's production goes against the grain, and means that it effectively shuts itself out of a large part of the world market for textiles and garments. Although domestic production and consumption of MMF has been increasing (see table 13), *the policy bias still prevails and needs to be redressed*.

The policy bias still prevails in the following way: *one*, controls on export of cotton and cotton yarn mean that prices of raw cotton are typically below international prices, which is an implicit subsidy to the consumers of cotton; *two*, the still high import duties on synthetic yarn and intermediates; *three*, the domestic duties such as excise are lower for cotton fabrics. All this means that the natural advantage towards cotton (arising from India's competitiveness in cotton production) has been given a major boost by government policy. Over time, this is changing with the increasing efficiency of domestic producers of MMF, and indeed the consumption mix has been changing gradually away from cotton. This trend can be accelerated by equalizing excise duties for different fibers, and providing inputs at international prices for the MMF producing industry. The same logic should be extended to the fabric stage, and at least garment exporters, if not manufacturers, should have effective recourse to imported fabrics of all varieties. In doing this, there will be the lurking fear amongst policy makers that the cotton economy may be disrupted. However, this need not happen, since there is immense potential to increase

consumption and especially exports several fold, which would mean an overall increase in demand for cotton (since blends use a lot of cotton), even if there is some substitution by MMF.

The potential gains from promoting a true multi-fiber policy cannot be precisely estimated, but the possibilities are very promising. One could think of an increase in India's overall exports based on the world demand pattern of non-cotton to cotton consumption, using as a base the current value of cotton based exports. In 1995-96, 70 percent of garment exports of US\$ 4464 million and 69 percent of all textiles exports including garments of US\$ 9023 million were cotton-based. If, on the other hand, cotton-based exports had been only 50 (40) percent of total exports, and assuming no decrease in cotton exports, total exports of textiles in 1995-96 would have been US\$ 12492 (15615 if 40 percent), and garments would have been US\$ 6242 million (7803 if 40 percent). Thus, *had India's policies not been cotton-biased, its textile and garments exports could have been as much as 75 percent higher than they are today*. Of course the domestic bias could have been substantially mitigated had the import duty drawback and the duty free import for export system worked efficiently.

Promotion of the handloom sector has been a central feature of the textile policy in India. According to the Ministry of Textiles Annual Report of 1995-96, handlooms provide direct and indirect employment to over 3 million weaver households. This, as well as the need to preserve culture and heritage, has meant that the Government has used several instruments to prop up the handloom sector. One of these is the **reservation** of 22 textile articles for **exclusive production in the handloom sector**, according to the latest policy on this issue dated August 1996. The implementation of this policy got a boost when in 1994, the Supreme Court dismissed the petitions challenging the Handlooms (Reservations of Articles for Production) Act 1985. In 1995-96, the government inspected 63280 powerlooms and lodged FIRs against 15 for violation of this order!

The futility of this policy can be gauged from the fact that there were, according to Government estimates, as many as 1.4 million powerlooms in India by the end of 1995. As Misra (1993) points out, the policy ignores the dismal past record of enforcement measures as well as the huge administrative machinery that is required to enforce this policy. Besides requiring this totally unproductive administration, the policy is also a breeding ground for corruption. It is no surprise that Misra concludes that the Act has made little material difference to the state of the handloom sector. We would therefore recommend a scrapping of this policy. Given, however, that the preservation of handlooms is linked with preservation of culture and heritage, and that the Government may therefore still wish to preserve it, it

would be preferable to do that via a direct scheme to help the sector rather than penalize other sectors by restricting their output.

**Impact of the Hank Yarn Obligation:** The policy stipulates that spinning mills should supply not less than 50 percent of the yarn marketed by them in the form of hanks for use by the handloom sector. Hank yarn is exempted from excise and sales tax, and opens up the possibilities of corruption, misdeclaration and so on. There have been both direct costs of this policy as well as the longer term impact on investment decisions. Misra (1993) advocates that the obligation be done away with, and if necessary independent hank reeling centers close to handloom concentrations could be set up by handloom development agencies.<sup>22</sup>

All these policy restrictions impair the efficiency of the industry and result in an upward shift in its supply curve. This in turn results in a lower measured ETE than would have prevailed in a less constraining policy environment. Removing these restrictions will be vital in the post quota world where competitiveness will be the key.

## **V. Trade Policies and Procedures**

With the substantial easing of trade restrictions, and especially with the bilateral treaties with the US and the EU signed in 1994, imports of raw cotton, yarn, and selected fabrics have been freed<sup>23</sup>. Tariffs have come down and are slated to go down further in terms of the treaties with the EU and the USA (to levels between 20 and 40 percent by the year 2000). The problem that remains is one of procedures. Nair and Kaul (1996) have documented these bottlenecks and transaction costs in the process of exporting garments from the country. They document the fact that the procedures for exporting and importing remain very cumbersome, and there are substantial delays at each stage of the process. For example, in getting a duty free advance license for export production, the average time taken by 35 exporters was 7 months. Another two months on average were needed for redeeming the legal undertaking, making it 9 months in all. On the other hand, at a cost of Rs. 10000, the exporter could

---

<sup>22</sup> For details, see annex 3, World Bank, vol. 2 (1997: 10-12). Also see Misra (1993: 223-26).

<sup>23</sup> In exchange for increases in MFA quotas in the US and EU, India liberalized its policies on imports of textiles and garments. Imports of wool tops, synthetic fibers, textile yarns and some industrial fabrics were freed in early 1995. While products such as selected textile fabrics, selected textile products and apparel items were made eligible to be imported with a new import license, it was agreed that these would be freed at a future date (in 1998, 2000 or 2002). Though negotiated bilaterally, these reforms apply to all countries exporting to India (i.e. on a most favored nation basis).



get his license in 2.5 months, and for another Rs. 8000 could get his legal undertaking redeemed in 15 days. Similarly, at a cost of 3-5 percent of the drawback claim, the exporter could collect his drawback claim within 7 days instead of 6 months! Such examples abound through the paper.

In most cases, the exporter has no option but to pay up or else get rejected or at the least suffer very costly delays. This means that the system is in effect imposing a direct tax burden on the exporter or importer, as the case may be. If we assume that the post-bribe situation is the least that the trader can live with in terms of delays, then the amount he pays is the tax for the provision of minimum acceptable service. For an exporter, it would be an equivalent to an export tax, whose incidence would be lower for larger value of exports or imports, since many bribe transactions are reckoned in terms of absolute values. This export tax would reduce export profitability, and in a dynamic sense, also lower the incentives to invest in export activity. Even if the exporter managed to load the costs on to export prices, it could create incentives for alternative sources of goods by the importers abroad. Analytically, therefore, an improvement in transaction times through legal channels is exactly equivalent to a reduction in the export tax. Since the government does not collect any of this tax, and instead loses potential investment in exports, it would be in its self-interest (defined in terms of the national good) to reduce transaction times as well as to reduce the maze of procedures that traders still have to follow.

## ***VI. Conclusion:***

We have seen that the international trade regime in textiles and clothing continues to impose a distortionary tax on Indian exports. In this paper, we sought to calculate the export tax equivalent (ETE) for garment and textile exports to the USA and the EU. ETEs can be thought of as a measure of excess demand, given the existence of quota restrictions and a certain level of supplier capabilities. Thus the ETE is a measure of restrictiveness of the quota regime. In interpreting ETEs as a measure of competitiveness, however, additional information on competing countries' ETEs, quotas and exports is needed.

ETEs for garments were high for the USA, in the range of 28-37 percent over 1993-1996. For the EU, the range was 14-19 percent. However, while there was a decline in the ETE for USA in 1996, there was a corresponding increase in the EU. It is too early to say whether the decline in the US represents a decline in the competitiveness of Indian exports (assuming here that ETE does indeed represent

competitiveness) arising from the NAFTA-induced strength of Mexican exports. But it could be a warning signal.

In the literature to date, we have not observed any disaggregation of ETE by fiber. *A priori* hypothesising would say that importing countries would try to restrict Indian cotton exports more than synthetics. This was confirmed by our analysis for the USA, where we found the weighted average ETEs for cottons substantially higher than that for synthetic garments. However, this tendency was not observed for the EU.

Our analysis showed that as far as India is concerned, the USA lags behind the EU in terms of reducing the restrictiveness of the quota regime. This can be inferred from: *one*, a higher share of Indian exports to EU are non-restricted; *two*, average ETEs are lower in the EU; *three*, the fiber-wise and within-fiber ETEs showed that the EU, unlike the USA, did not discriminate between fibers in placing restrictions on Indian exports.

The international trade regime is not the sole problem faced by the exporters of garments and textiles in India. There is, in addition, a set of formidable domestic policy hurdles they have to contend with. These include reservation of the garment production for the small scale sector, lack of a flexible labor policy, policy bias against synthetic fibers, very high transaction costs of export activity, and some anachronistic policies such as handloom reservation and hank yarn obligation.

In both the garment and textiles sectors, India's **strengths lie** basically in natural resources and factor endowments - namely cheap labor and raw cotton. Also, the garment industry is based on a system of decentralized production i.e. subcontracting, which is a low-risk, low-capital strategy. This production structure has served the industry fairly well so far but it has also ensured the exclusion of Indian products from the mass market for clothing, which demands good and consistent quality across large volumes of a single item of clothing. Thus an assembly-line, factory-type system of production may be necessary if exports are to grow well beyond current levels.

The dismantling of the quota regime represents both an opportunity as well as a threat. An opportunity because markets will no longer be restricted; a threat because markets will no longer be guaranteed by quotas, and even the domestic market will be open to competition. This means that in today's world, observed ETEs would surely have been higher if the industry had been relieved of the documented domestic policy constraints. In tomorrow's world, on the other hand, the continued well-being of the industry may depend on timely action to relax these policy constraints.

## ANNEX

**Table 1 - TRENDS IN INDIAN EXPORTS OF TEXTILES AND GARMENTS (US \$mil.)**

	1996-97 (Q.E.)	1995-96	1994-95	1993-94
Total Indian exports, f.o.b.	33768.0	32311.0	26855.0	22683.0
Export of yarn, textiles and garments, of which,	7990.4	7468.7	6352.0	4739.0
Cotton yarn, fabrics, made-ups etc.	3113.5	2576.8	2234.0	1537.0
Readymade garments of which,	4762.2	4502.3	4458.7	3653.4
Cotton garments	3418.4	3150.2	3127.7	2744.4
Synthetic garments	(71.78)	(69.97)	(70.15)	(75.12)
Export to USA	1176.9	1179.8	1160.7	794.7
Export to EU	(24.71)	(26.20)	(26.03)	(21.75)
Readymade garments of which,	1352.7	1200.0	1257.9	930.2
Export to USA	(28.40)	(26.65)	(28.21)	(25.46)
Export to EU	1900.3	1969.7	2042.4	1522.9
	(39.90)	(43.75)	(45.81)	(41.68)

Figures in brackets show percentages of readymade garments, Q.E.: Quick Estimate

Source: Economic Survey, 1996-97, Handbook of Export Statistics, Data from Ministry of Commerce

**Table 2 - Export Tax Equivalents for Indian Garment Exports to the USA and the EU (Percent)**

Category	1996	1995	1994	1993
<b>USA:</b>				
<b>Group I</b>				
Weighted average	31.3	41.2	37.8	44.1
Simple average	23.4	25.9	24.7	32.8
<b>Group II</b>				
Weighted average	0.6	0.8	9.7	5.8
Simple average	1.3	1.5	14.6	13.8
<b>Total</b>				
Weighted average	28.0	36.9	35.7	38.8
Simple average	6.4	7.2	17.1	18.5
<b>Cotton</b>				
Weighted average	38.9	51.0	50.9	48.2
Simple average	14.2	15.8	23.7	28.1
<b>Synthetics</b>				
Weighted average	16.4	16.4	13.0	4.7
Simple average	10.4	13.1	19.0	11.8
<b>EU:</b>				
<b>Total</b>				
Weighted average	18.6	14.4	13.9	14.0
Simple average	14.8	11.9	12.9	12.5
<b>Cotton</b>				
Weighted average	17.4	13.3	14.1	13.7
Simple average	16.2	12.7	14.3	14.3
<b>Synthetics</b>				
Weighted average	22.9	16.8	9.0	14.5
Simple average	12.6	10.6	11.4	10.8

Table 3 - Product Level Export Tax Equivalents for the USA (Percent)

Category	Description	1997	1996	1995	1994	1993
<b>USA GROUP-I</b>						
334 / 634	Other coats M & B	12.6	...	...	...	...
335 / 635	Coats and jackets WG & I	2.1	5.5	...	...	...
336 / 636	Dresses including uniforms	26.6	33.6	31.6	32.7	33.8
338 / 339	Knit shirts M & B & knit blouses W & G	37.6	57.8	101.1	84.4	134.4
340 / 640	Gents shirts not knit	42.4	50.8	53.8	71.9	75.3
341	Ladies blouses not knit	6.8	10.4	13.4	18.7	19.3
342 / 642	Ladies skirts	11.3	14.4	21.8	16.5	12.3
347 / 348	Trousers/slacks/M & B/WG & I shorts (outer) M & B/WG & I	31.5	31.6	29.1	19.1	29.9
351 / 651	Night shirts pyjamas and other night wear	10.8	21.2			
641	Ladies blouses and shirts not knit W & G	3.9	8.4	8.4	4.5	23.7
<b>USA GROUP-II</b>						
<b>Cotton Fibres</b>						
237	Play suits, sun suits, wash suits, creepers, rompers etc. of cotton & man made fiber	2.6	1.6	2.0	17.7	15.0
239	Infant wear of cotton and man made fiber	0.2	0.1	0.2	0.8	0.9
330	Handkerchiefs	1.7	1.0	1.3	9.8	20.6
331	Gloves and mittens	6.3	3.9	4.8	50.1	60.0
333	Suit type coats M&B	1.5	0.9	1.1	12.9	9.5
349	Brassiers and body supporting garments	0.8	0.5	0.6	4.3	4.8
350	Dressing gowns including bathrobes, dusters etc.	3.0	1.8	2.3	24.3	27.6
352	Underwear	5.4	3.3	4.1	9.0	7.3
359	Other apparels	0.2	0.1	0.2	1.6	1.3
<b>MMF</b>						
630	Handkerchiefs	1.8	1.1	1.4	10.8	3.0
631	Gloves and mittens	5.3	3.3	4.1	5.0	3.7
632	Hosiery					
633	Suit type coats M&B	2.5	1.6	1.9	20.3	18.9
638	Knit shirts (including T-shirts) M&B	1.9	1.2	1.5	15.0	20.1
639	Knit shirts & knitted blouses (including T-shirts) W&G	2.1	1.3	1.6	10.4	7.9
643	Suit M&B	1.5	0.9	1.2		
644	Suit W&G	6.2	3.8	4.7	37.2	37.1
645	Sweaters M&B	2.3	1.5	1.8	22.5	25.0
646	Sweaters W&G	2.6	1.6	2.0	21.8	25.7
649	Brassiers and body supporting garments					
650	Dressing gowns including bathrobes, dusters etc.	4.5	2.8	3.4	31.5	21.3
652	Underwear	1.2	0.7	0.9	9.1	8.5
659	Other apparels	0.3	0.2	0.3	1.6	1.9
<b>SILK AND OTHER VEGETABLE FIBERS LIKE RAMIE, LINEN, SISAL ETC.</b>						
833	Suit type coats M&B	1.1	0.7	0.9	8.5	8.0
834	Other coats M&B	1.4	0.9	1.0	10.2	12.0
835	Coats and jackets W&G	1.2	0.7	0.9	26.2	15.2
836	Dresses	2.1	1.3	1.7	18.0	16.1
840	Shirts and blouses not knit	1.1	0.7	0.9	10.0	9.7
842	Ladies skirts	1.4	0.9	1.1	10.5	8.9
845	Sweater (other vegetable fiber)	2.8	1.7	2.2	17.1	17.5
847	Trousers slacks (M&B W & G), shorts	0.9	0.6	0.7	7.8	8.8
859	Other apparel	0.2	0.1	0.1	1.8	1.6

For 1997 the unit values of exports have been assumed to be the same as in 1996

Table 4 - Product Level Export Tax Equivalents for the EU (Percent)

Category	Description	1997	1996	1995	1994	1993
4	KT. Shirts,T-shirts, similar KT. garments	18.1	28.3	14.5	13.2	12.0
5	Jerseys, pullovers, slipovers, waistcoats, twinsets, cardigans, bed jackets and jumpers (other than jackets and blazers), anoraks, windcheater, waister KTD or crocheted.	2.9	3.1	5.8	10.1	5.7
6	Woven trousers for ladies and gents, woven shorts for gents.	5.9	9.0	9.6	10.4	6.9
7	Ladies blouses	4.0	4.3	7.0	10.3	10.5
8	Gents shirts	9.9	12.6	11.3	14.2	14.8
26	Ladies dresses	24.5	54.5	39.0	36.1	41.3
27	Ladies skirts	4.1	5.1	4.8	8.6	7.1
29	Ladies suits and ensembles	0.9	1.5	1.7	1.2	1.4

For 1997 the unit values of exports have been assumed to be the same as in 1996

Table 5 - Export Tax Equivalents for Cotton Garments Exported to the EU (Percent)

Category	Description	1996	1995	1994	1993
4	KT. Shirts,T-shirts, similar KT. garments	27.83	14.63	13.32	11.82
5	Jerseys, pullovers, slipovers, waistcoats, twinsets, cardigans, bed jackets and jumpers (other than jackets and blazers), anoraks, windcheater, waister KTD or crocheted.	3.29	6.38	11.34	6.58
6	Woven trousers for ladies and gents, woven shorts for gents.	9.50	10.32	10.60	7.15
7	Ladies blouses	4.48	7.76	11.07	11.67
8	Gents shirts	12.38	11.25	14.14	14.73
26	Ladies dresses	65.11	43.33	43.05	53.23
27	Ladies skirts	5.41	5.26	9.52	7.47
29	Ladies suits and ensembles	1.73	2.68	0.95	1.52

Export Tax Equivalents for Cotton Garments Exported to the USA (Percent)

Category	Description	1996	1995	1994	1993
<b>USA Group I</b>					
335	Coats and jackets WG & I	6.64			
336	Dresses including uniforms	39.41	34.66	38.80	33.42
338	Knit shirts M & B & knit blouses W & G	56.07	98.61	84.43	133.97
340	Gents shirts not knit	49.06	52.85	71.87	73.91
341	Ladies blouses not knit	11.04	13.36	18.68	19.34
342	Ladies skirts	13.57	22.92	16.73	12.22
347 / 348	Trousers/slacks/M & B/WG & I shorts (outer) M & B/WG & I	31.03	29.17	19.07	29.44
351	Night shirts pyjamas and other night wear	21.00			
<b>USA GROUP-II</b>					
237	Play suits,sun suits, wash suits,creepers, rompers etc. of cotton & man made fiber	1.63	2.00	17.70	15.05
239	Infant wear of cotton and man made fiber	0.124	0.15	0.84	0.86
330	Handkerchiefs	1.04	1.31	9.78	20.58
331	Gloves and mittens	3.90	4.87	50.15	59.97
333	Suit type coats M&B	0.91	1.12	12.85	9.46
349	Brassiers and body supporting garments	0.53	0.65	4.35	4.79
350	Dressing gowns including bathrobes, dusters etc.	1.85	2.27	24.25	27.62
352	Underwear	3.34	4.14	9.01	7.28
359	Other apparels				1.26

Table 6 - Export Tax Equivalents for Synthetic Garments Exported to the USA (Percent)

Category	Description	1996	1995	1994	1993
<b>USA GROUP-I</b>					
635	Coats and jackets WG & I	4.38	...	...	...
636	Dresses including uniforms	30.24	29.36	27.88	...
338 / 339	Knit shirts M & B & knit blouses W & G	47.86	110.55	77.31	...
640	Gents shirts not knit	57.95	56.09	76.88	...
642	Ladies skirts	14.48	20.94	16.15	...
347 / 348	Trousers/slacks/M & B/WG & I shorts (outer) M & B/WG & I	20.46	29.20	30.33	...
651	Night shirts pyjamas and other night wear	16.69			
641	Ladies blouses and shirts not knit W & G	8.10	8.44	4.49	...
<b>USA Group II</b>					
<b>MMF</b>					
630	Handkerchiefs	1.12	1.37	10.84	2.98
631	Gloves and mittens	3.28	4.05	5.01	3.71
633	Suit type coats M&B				18.94
638	Knit shirts (including T-shirts) M&B			14.97	20.08
639	Knit shirts & knitted blouses (including T-shirts) W&G	1.33	1.64	10.40	7.94
643	Suit M&B	0.94	1.16		
644	Suit W&G	3.84	4.75	37.20	37.13
645	Sweaters M&B	1.45	1.79	22.53	24.99
646	Sweaters W&G	1.63	2.00	21.81	25.67
650	Dressing gowns including bathrobes, dusters etc.	2.79	3.44	31.46	21.26
652	Underwear	0.74	0.91	9.09	
659	Other apparels	0.22	0.26	1.62	1.87

Export Tax Equivalents for Synthetic Garments Exported to the EU (Percent)

Category	Description	1996	1995	1994	1993
4	KT. Shirts, T-shirts, similar KT. garments	20.90	12.00	7.89	9.59
5	Jerseys, pullovers, slipovers, waistcoats, twinsets, cardigans, bed jackets and jumpers (other than jackets and blazers), anoraks, windcheater, waister KTD or crocheted.	1.81	3.89	7.18	3.13
6	Woven trousers for ladies and gents, woven shorts for gents.	7.94	8.63	10.16	6.54
7	Ladies blouses	3.82	5.98	8.99	8.87
8	Gents shirts	12.72	11.59	15.42	14.96
26	Ladies dresses	47.59	36.40	32.16	34.94
27	Ladies skirts	4.80	4.48	7.99	6.82
29	Ladies suits and ensembles	1.39	2.11	1.38	1.29



Table 7- Un- Restricted exports vis-à-vis total (US \$ million)

Country	Category	1996	1995	1994	1993
USA	Restricted	1223.2	1082.4	1162.4	852.2
		(92.07)	(92.61)	(90.52)	(95.57)
	UR	105.4	86.4	121.7	39.5
		(7.93)	(7.39)	(9.48)	(4.43)
EU	Total	1328.6	1168.8	1284.1	891.7
		(100)	(100)	(100)	(100)
	Restricted	1358.5	1431.2	1044	939.6
		(70.80)	(71.26)	(58.18)	(64.13)
Total Restrained Countries	UR	560.3	577.3	750.4	525.6
		(29.20)	(28.74)	(41.82)	(35.87)
	Total	1918.8	2008.5	1794.4	1465.2
		(100)	(100)	(100)	(100)
Countries OBA	Restricted	2700.7	2625.9	2320.5	1885.2
		(78.54)	(78.15)	(69.24)	(73.86)
	UR	738.1	734.3	1030.7	667.3
		(21.46)	(21.85)	(30.76)	(26.14)
Grand Total	Total	3438.8	3360.2	3351.2	2552.5
		(100)	(100)	(100)	(100)
	Total	1353.4	1113.3	1070.7	914.1
		(100)	(100)	(100)	(100)
	Restricted	2700.7	2625.9	2320.5	1885.2
		(56.36)	(58.70)	(52.48)	(54.38)
	UR	2091.5	1847.6	2101.4	1581.4
		(43.64)	(41.30)	(47.52)	(45.62)
	Total	4792.2	4473.5	4421.9	3466.6
		(100)	(100)	(100)	(100)

UR= Products outside the bilateral agreements + non restricted products within bilateral agreements

**Table 8 - Export Tax Equivalents for all garments**

		1996	1995	1994	1993
USA	Only quota products	28.03	36.9	35.66	31.67
	All products	25.1	33.05	29.21	35.5
EU	Only quota products	18.62	14.35	13.93	13.96
	All products	11.92	9.46	8.01	8.85
All products : includes all garments exported to the country in that year.					
Only quota products: includes garments having positive ETEs for any of the years, 1993-96.					

Table 9- Export tax equivalents for textile products

Country/Category		Description	1996 ETE Percent	1995 ETE Percent	1994 ETE Percent	1993 ETE Percent
USA						
	218	Yarn dyed fabric (Cotton/MMF)	33.05	38.81	13.54	7.95
	219	Cotton duck fabric (Canvas)	7.63	3.57	4.05	2.03
	313	Cotton sheeting	7.28	4.72	...	...
	314	Cotton poplin	3.38	2.15	...	...
	315	Cotton print cloth	12.80	9.60	...	...
	317	Twill cloth (cotton)	8.00	7.77	...	...
	326	Cheese cloth (cotton)	2.84	2.00	...	...
	363	Terry towels (mostly cotton)	12.46	11.76	...	...
369 (D) MM/PL		Dish cloth (cotton)	14.42	9.08	...	...
369 (D) HL		Dish cloth (cotton)				
369 (S) MM/PL		Shop towels (cotton)	21.61	14.49	...	...
369 (S) HL		Shop towels (cotton)		0.00	...	...
Group II						
	Yarn		10.91	5.09	...	...
Fabrics	Cotton fabric		0.00			
MMF	Man made (made ups etc.)		0.00	20.78	...	...
EEC						
	1	Cotton yarn not put up for retail sale	14.31	20.52	...	...
	2	Woven fabrics of cotton other than gauze, terry fabrics, narrow woven fabrics, pile fabrics, chenille fabrics, tulle and other net fabrics	14.38	17.07	...	...
	2 (a)	of which: other than unbleached or bleached	2.87	3.26	...	...
	9	Terry towelling and other similar woven terry fabrics of cotton: toilet linen and kitchen linen, other than knitted or crocheted, of terry towelling & similar woven terry fabrics of cotton.	14.36	8.22	...	...
	20	Bed linen, other than knitted or crocheted	2.07	3.26	...	...
	39	Table linen, toilet and kitchen linen, other than knitted or crocheted, other than of terry towelling or similar terry fabrics of cotton	0.00	0.00	...	...

**Table 10 - Customs Duty for Man-Made Fibres**

	1984	1987	1989	1990	1993	1996
<b>MMF</b>						
SF	37.0	60.0	55.0	40.0	40.0	25.0
SF	175.0	187.5	180.0	180.0	85.0	45.0
SF	140.0	155.0	145.0	150.0	85.0	45.0
<b>Inputs</b>						
MT	140.0	195.0	195.0	150.0	70.0	35.0
TA	140.0	195.0	195.0	150.0	70.0	35.0
EG	110.0	150.0	90.0	150.0	70.0	35.0
aprolactum	90.0	90.0	75.0	75.0	60.0	45.0
crylonitrile	110.0	110.0	60.0	60.0	40.0	20.0

Source : Office of the Textile Commissioner and

'Handbook of Statistics on Man-Made / Synthetic Fibre / Yarn Industry, *Association of Synthetic Fibre*

**Table 11 - Nominal Protection Coefficient**

	1984	1987	1989	1990	1993	1996
<b>MMF</b>						
VSF	1.1	1.1	0.7	0.9	0.8	0.9
PSF	2.5	2.7	2.3	2.6	1.3	1.0
ASF	3.0	2.6	2.3	2.3	1.5	1.0
<b>Inputs</b>						
DMT	...	...	...	2.6	1.6	0.8
PTA	...	...	...	2.5	1.7	1.0
MEG	...	...	...	2.5	1.4	1.3
Caprolactum	...	...	...	1.7	1.6	1.2
Acrylonitrile	...	...	...	2.1	1.7	...
Nominal Protection Coefficient: Basic Price / CIF Value						

Source: Handbook of Statistics on Man-Made / Synthetic Fibre / Yarn Industry, *Association of Synthetic Fibre Industry*, and the Office of the Textile Commissioner

**Table 12 - Consumption of Textiles in 1992 (%)**

	Cotton	Wool	Cellulosics	Synthetics
India	72	2	8	18
China	60	5	4	31
Pakistan	88	2	1	9
Indonesia	43	1	12	44
Malaysia	35	4		61
Thailand	50	1	7	42
Korea	22	4	4	70
US	37	2	5	56
Germany	17	6	11	66
Japan	26	6	6	62

Source: World Bank (1997)

Table 13- Per capita availability of cloth

Year	Estimated mid year population (In millions)	Availability for home consumption (Million square metres)			Per capita availability (Square metres)		
		Cotton cloth	Blended/mixed fabric	MMF fabrics	Cotton cloth	Blended/mixed fabric	MMF fabrics
1985-86	754.7	1134	1636	3003	15.03	2.17	3.98
1986-87	769.9	1138	1780	3236	14.79	2.31	4.2
1987-88	785.2	1089	174	3404	13.87	2.22	4.34
1988-89	800.4	1046	1833	3843	13.07	2.29	4.8
1989-90	815.7	10639	1676	3843	13.04	2.05	4.71
1990-91	832	10846	1940	4466	13.04	2.33	5.37
1991-92	851.5	1167	2539	4788	13.7	2.98	5.62
1992-93	870	13049	2367	4481	15	2.72	5.15
1993-94	889	1381	2806	6087	15.54	3.16	6.85
1994-95	906	12808	3122	6925	14.1	3.45	7.75
1995-96	920	13660	2964	766	14.85	3.22	8.44

Source: Handbook of Statistics on Man-Made /Synthetic Fibre / Yarn Industry, Association of Synthetic Fibre

## REFERENCES

- Alam, Ghayur (1991) Impact of Non-Economic Factors on Choice of Technology and Organization of Production: a study of small Industrial Firms in India. Mimeo for the ILO, New Delhi.
- Chatterjee, Somnath and Rakesh Mohan (1993): *India's Garment Exports*, Economic and Political Weekly, August 28, M-95-119.
- Hamilton, Carl B. (1990) *Textiles Trade and the Developing Countries: Eliminating the Multi-Fiber Arrangement in the 1990s*, World Bank, Washington, DC.
- Hussain Committee (1997) Report of the Expert Committee on Small Enterprises, Chairman Abid Hussain. New Delhi.
- ICRA (1996) Cotton Sector Study, for World Bank, ICRA, New Delhi.
- Khanna, SR (1991) *International Trade in Textiles: MFA Quotas and a Developing Exporting Country*, ICRIER and Sage Publications, New Delhi.
- Khanna, SR (1993) The Challenge of Global Competition in the 1990s: an agenda for enhancing the Competitive Position of the Indian Textiles and Clothing Industry. Mimeo, ICRIER, New Delhi.
- Kumar, Rajiv and SR Khanna (1990) India, the Multi-Fiber Arrangement and the Uruguay Round, in CB Hamilton (1990) (ed).
- Martin, Will (1996) The Abolition of the Multi-fiber Arrangement and its Implications for Fiber Markets. Mimeo, World Bank, Washington, DC, submitted for NCAER Seminar, April 26, 1996, New Delhi.
- Martin, Will and Suphat Suphachalasai (1990) Effects of the Multi-Fiber Arrangements on Developing Country Exporters: a Simple Theoretical Framework in CB Hamilton (1990) (ed).
- Nair, Raajesh M. and Pradeep Kaul (1996) *Exporting Garments from India*: Policy Paper no. 4, Project LARGE, New Delhi.
- Ramakrishna, R (1995) Workshop on Restructuring of Textile Industry, Background Paper, FICCI, New Delhi.
- Trela, Irene and John Whalley (1990) Unraveling the Threads of the MFA, in CB Hamilton (1990) (ed).
- World Bank (1997) *India: Cotton and Textile Industries-Maximizing the Potential for Growth in a More Competitive Environment*, Vol I and II, March 1997.
- Misra, Sanjeev (1993) *India's Textile Sector: a Policy Analysis*, Sage Publications, New Delhi.



# Policy Research Working Paper Series

Title	Author	Date	Contact for paper
WPS1993 Financial Safety Nets and Incentive Structures in Latin America	Philip L. Brock	October 1998	K. Labrie 38256
WPS1994 Estimating Wealth Effects without Expenditure Data — or Tears: with an Application to Educational Enrollments in States of India	Deon Filmer Lant Pritchett	October 1998	S. Fallon 38009
WPS1995 What Macroeconomic Policies Are “Sound?”	Mansoor Dailami Nadeem ul Haque	October 1998	B. Nedrow 31585
WPS1996 Namibia's Social Safety Net: Issues and Options for Reform	Kalinidhi Subbarao	October 1998	P. Lizarondo 87199
WPS1997 On Measuring Literacy	Kaushik Basu James E. Foster	October 1998	M. Mason 30809
WPS1998 The Structure and Determinants of Inequality and Poverty Reduction in Ghana, 1988–92	Sudharshan Canagarajah Dipak Mazumdar Xiao Ye	October 1998	A. Garscadden 38400
WPS1999 Heterogeneity among Mexico's Micro-Enterprises: An Application of Factor and Cluster Analysis	Wendy V. Cunningham William F. Maloney	October 1998	T. Gomez 32127
WPS2000 GATT Experience with Safeguards: Making Economic and Political Sense of the Possibilities that the GATT Allows to Restrict Imports	J. Michael Finger	October 1998	L. Tabada 36896
WPS2001 Measuring the Dynamic Gains from Trade	Romain Wacziarg	November 1998	S. Crow 30763
WPS2002 Accounting for Toxicity Risks in Pollution Control: Does It Matter?	Susmita Dasgupta Benoît Laplante Craig Meisner	November 1998	Y. D'Souza 31449
WPS2003 Thailand's Corporate Financing and Governance Structures	Pedro Alba Stijn Claessens Simeon Djankov	November 1998	R. Vo 33722
WPS2004 What Can Be Expected from African Regional Trade Arrangements? Some Empirical Evidence	Alexander Yeats	November 1998	L. Tabada 36896
WPS2005 Fiscal Federalism and Macroeconomic Governance: For Better or For Worse?	Anwar Shah	November 1998	S. Valle 84493
WPS2006 Household Welfare Measurement and the Pricing of Basic Services	Jesko Hentschel Peter Lanjouw	November 1998	PREM 87736

# Policy Research Working Paper Series

Title	Author	Date	Contact for paper
WPS2007 Regional Integration Arrangements: Static Economic theory, Quantitative Findings, and Policy Guidelines	Dean A. DeRosa	November 1998	L. Tabada 36896
WPS2008 Volatility and Contagion in a Financially Integrated World: Lessons from East Asia's Recent Experience	Pedro Alba Amar Bhattacharya Stijn Claessens Swati Ghosh Leonardo Hernandez	November 1998	D. Fischer 38656
WPS2009 Poverty and the Economic Transition: How Do Changes in Economies of Scale Affect Poverty Rates for Different Households?	Peter Lanjouw Branko Milanovic Stefano Paternostro	November 1998	P. Sader 33902
WPS2010 The Real Impact of Financial Shocks: Evidence from the Republic of Korea	Ilker Domaç Giovanni Ferri	November 1998	M. Greaves 81876
WPS2011 Measuring Poverty Using Qualitative Perceptions of Welfare	Menno Pradhan Martin Ravallion	November 1998	P. Sader 33902